

## 1 ABSTRACT OF THE DISCLOSURE

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3 An integrated circuit chip is provided with a JTAG TAP, an  
4 on-chip JTAG master coupled to the JTAG TAP and a microprocessor  
5 interface coupled to the JTAG master. This arrangement permits  
6 testing the integrated circuit chip without removing it from a  
7 circuit board or taking the circuit board out of service. It  
8 allows testing without regard to other chips on the same board.  
9 Preferably, the chip also has a conventional JTAG interface which  
10 is switchably uncouplable from the JTAG TAP.